

b5 cont  
A6 cont

dynamic conditions and provide said control signal to said booster to cause said booster to change braking force when said dynamic conditions indicate a condition of vehicle instability.

A7 prior art

16. (Amended) A braking system as specified in claim 12 wherein said processor is a part of an electronic stability system.

#### REMARKS

In the Office Action of September 7, 2001, the Examiner objected to the drawings and specification. Claims 8 to 11 and 20 to 24 were rejected as containing subject matter not described in the specification. Claim 8 to 24 were rejected as not clearly claiming the invention. All claims are rejected as anticipated or obvious in view of EP 0 798 187 alone or in view of Sato and/or Kircher.

As set forth above, Applicants have amended the specification to overcome the Examiner's objections.

Reconsideration and withdrawal of the drawing objection is requested. Applicant's Figure 3 is a drawing that shows the claimed invention incorporated into an Electronic Stability System. This is described in the specification at page 9, paragraphs [0028] to [0030]. The use of a controller 5 to control the actuator for each wheel is the essence of an Electronic Stability System.

Claims 6, 8 and 12 are amended to overcome the rejection based on 35 U.S.C. § 112. The claims as amended have the same scope.

The Examiner is respectfully requested to reconsider and withdraw the rejection under 35 U.S.C. § 112, first paragraph. The specification makes clear in

paragraph [0028] that an actuator 6 and clamping device 7 is provided for each vehicle wheel, of which there are usually at least 4. Accordingly, the specification supports the term “at least one clamping device.”

Applicants respectfully traverse the rejections based on 35 U.S.C. § 102 and 103 and request reconsideration of the claims in view of the following remarks.

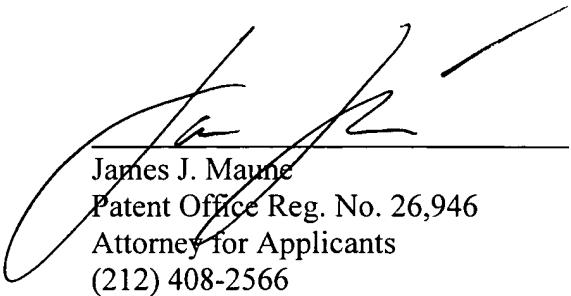
Each of the independent claims calls for detecting “dynamic conditions of a vehicle” and analyzing the dynamic conditions to detect a condition of vehicle instability. The dynamic conditions are defined by examples, which may include steering wheel angle, wheel speed, yaw rate and transverse acceleration. These dynamic conditions may evidence vehicle instability, such as skidding, swerving and the like. The dynamic conditions of the vehicle are not represented by the action of the operator, such as operation of the accelerator and brake. Accordingly, the independent claims are clearly distinguished over EP 0 798 187, which discloses a system that only responds to operator actions, not to dynamic conditions which represent vehicle instability, as claimed. The Sato reference describes a system that likewise responds to operation of the accelerator, not the dynamic conditions.

The Kircher reference describes an electronic stability system, which responds to vehicle dynamic conditions, but does not provide an increase in braking force when vehicle instability is detected.

In view of the above, Applicant respectfully traverse the rejections based on the references and requests favorable reconsideration thereof.

Attached here to is a **Version With Markings to Show Changes Made.**

Respectfully submitted,

  
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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

Amend Paragraph [0013] as follows:

[0013] (Amended) The boosting of the braking effect of the brake system as a function of pedal force on the brake pedal may be provided by a braking force booster having a variable booster characteristic. Variation of the characteristic may be effected for example by switching between at least two predetermined characteristics of [breaking] braking force as a function of brake pedal force.

Amend Paragraph [0023] as follows:

[0023] (Amended) A first example of a device according to the invention, shown in Figure 1, has a processor 1 for monitoring vehicle dynamic conditions and detecting a condition of vehicle instability. Processor 1 receives signals from detectors, such as steering wheel angle [ $W_1$ ]  $W_L$  rotational wheel speed [ $M_R$ ]  $n_R$ , yaw rate  $G_R$  and transverse acceleration  $\dot{V}_{quer}$ , and provides an output signal A1, which may be provided to [by] an Electronic Stability (ESP) control unit 8, for vehicle movement dynamics control, as well as to a brake controller 3. Brake controller 3 operates to control the operation of braking force booster 2, which increases the braking force supplied by the brake pedal 8. Controller 3 provides for variation in the braking force applied to the vehicle wheels as a function of applied brake pedal force.

Amend Paragraph [0029] as follows:

[0029] (Amended) Now if the processor 1 detects an unstable condition respecting the dynamics of vehicle movement, the controller 5 drives the actuator 6 so that the free play of the clamping device 7 is overcome before the brake action is actually produced by the driver of the vehicle, so that the brake is preloaded.

In the Claims:

Amend claims 6, 8 and 12 as follows:

6. (Amended) A method as specified in claim 5 wherein said monitoring comprises monitoring the operator's use of [the] an accelerator.

8. (Amended) A method for controlling a braking system of a vehicle having at least one clamping device for braking a vehicle, and an actuator for moving said clamping device into clamping engagement, comprising:

detecting dynamic conditions of operation of said vehicle;  
analyzing said dynamic conditions to detect a condition of vehicle instability; and  
in response to detection of a condition of vehicle instability operating said actuator to overcome free play of said at least one clamping device.

12. (Amended) A braking system for a vehicle comprising:  
a brake pedal for operation by a vehicle operator for applying braking force;  
a braking force booster for increasing said braking force, said booster

providing a first normal braking force as a function of force applied to said brake pedal and being responsive to a supplied control signal to change said normal braking force as a function of force applied to said brake pedal; and

a processor responsive to supplied signals representing dynamic conditions of operation of said vehicle, said processor being programmed to analyze said dynamic conditions and provide[s] said control signal to said booster to cause said booster to change braking force when said dynamic conditions indicate a condition of vehicle instability.

16. (Amended) A braking system as specified in claim 12 wherein said processor is a part of [one] an electronic stability system.